Prenocephale

Prenocephale was a small pachycephalosaurid dinosaur genus from the Late Cretaceous (Campanian) of Mongolia and was similar in many ways to its close relative, *Homalocephale*, which may simply represent *Prenocephale* juveniles.

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Description

Life restoration

Adult *Prenocephale* probably weighed around 130 kilograms (290 lb) and measured around 2.4 metres (8 ft) long. Unlike the flattened wedge-shaped skull of *Homalocephale* (a possible juvenile trait also potentially seen in early growth stages of *Pachycephalosaurus*), the head of *Prenocephale* was rounded and sloping. The dome had a row of small bony spikes and bumps. It lived in what is now Mongolia, but in high upland forests, not the dry deserts of Mongolia today.[1]

Like some other pachycephalosaurs, *Prenocephale* is known only from skulls and a few other small bones. For this reason, reconstructions usually depict *Prenocephale* as sharing the basic body plan common to all of the other Pachycephalosauria: a stout body with a short, thick neck, short forelimbs and tall hind legs.

The head of *Prenocephale* was comparable to that of *Stegoceras*, albeit with closed supratemporal fenestrae. Also, the paired grooves above the supraorbitals/prefrontals (along with a posterior parietal that restricts the frontal dome) are absent in *Prenocephale*. This differentiates the species from *Stegoceras*, as such features are common in the latter. The North American *Sphaerotholus* was considered a synonym of *Prenocephale*

Prenocephale

Temporal range: Late Cretaceous, 80–75 Ma

Pre€ € O S D C P T J K PgN

Cast of a *P. prenes* skull

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Clade:	Dinosauria
Order:	†Ornithischia
Family:	†Pachycephalosauridae
Genus:	†*Prenocephale* Maryańska & Osmólska, 1974

Species

- †***P. prenes*** Maryńska & Osmólska, 1974 (type)

Synonyms

- *Homalocephale*? Maryanska & Osmólska, 1974

by Sullivan (2003), but Longrich et al. (2010) and Schott and Evans (2016) kept it as a distinct genus based on cladistic analysis. *Homalocephale* has been viewed as a possible juvenile of *Prenocephale* due to the lack of a dome and its discovery in the same location and chronological interval, but new specimens of *Prenocephale*, including a juvenile specimen, suggest that *Homalocephale*, even if its holotype is a juvenile, is distinct.[2][3][4]

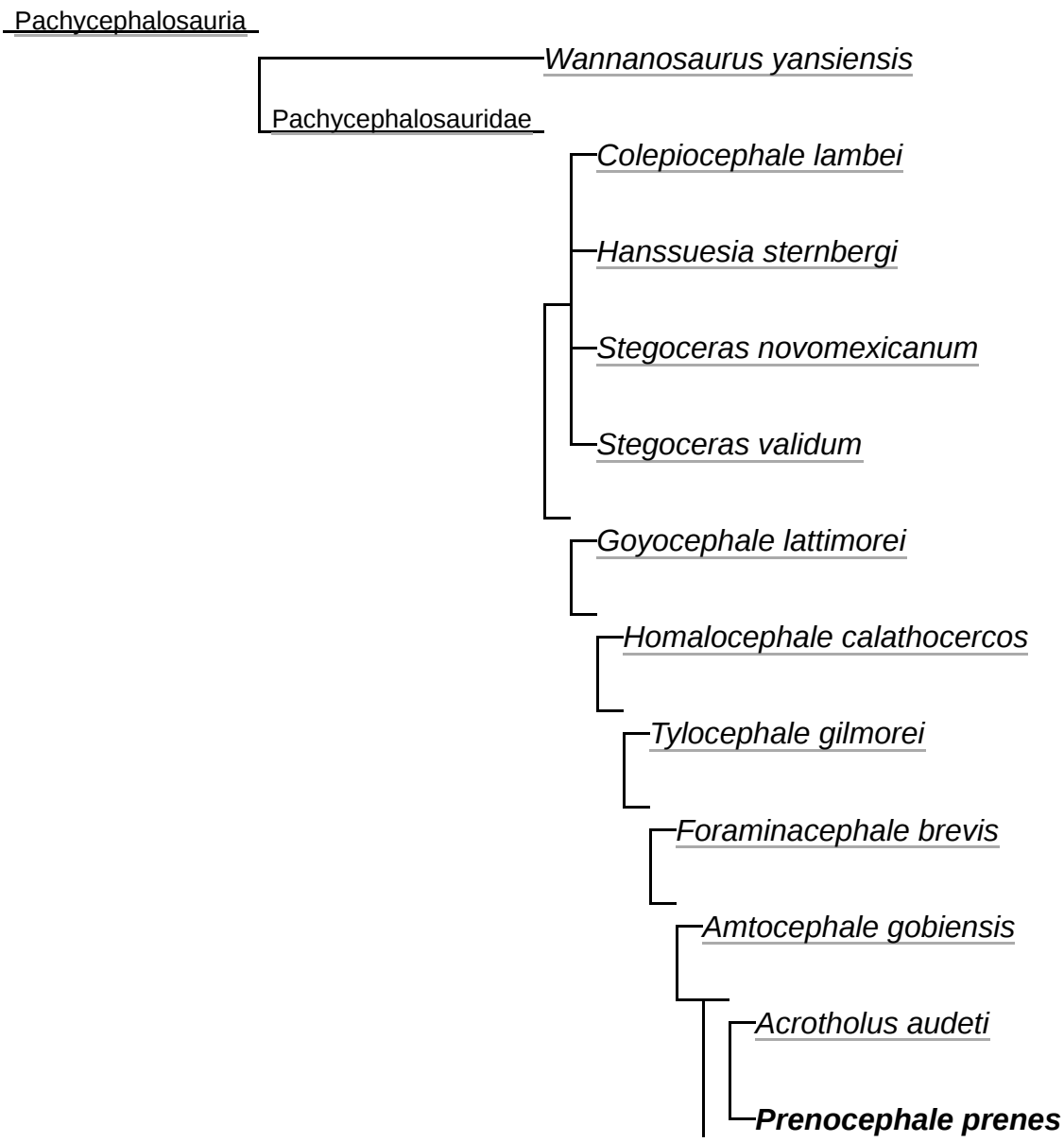
Classification

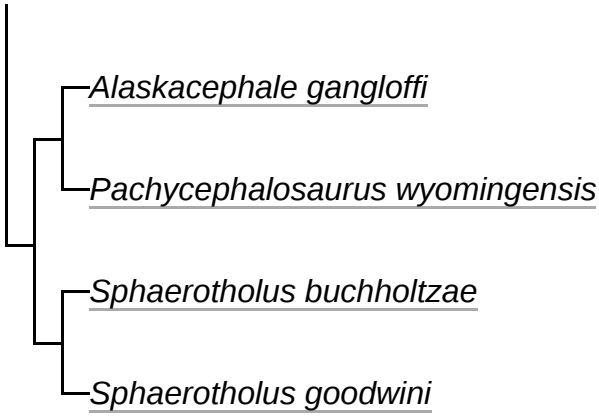
Prenocephale is a member of the Pachycephalosauria, a large clade of herbivorous/omnivorous dinosaurs from the Late Cretaceous.

Front view of skull

Robert Sullivan considered *Foraminacephale*, *"Prenocephale" edmontonensis*, and *Sphaerotholus goodwini* to form a clade with the Asian taxon *P. prenes*. He considered *Tylocephale* the sister taxon to the *Prenocephale* clade, while sinking *Sphaerotholus buchholtzae* as a subjective junior synonym of *"P." edmontonensis*.[5] They all possess a distinct row of nodes on the squamosal and parietal areas of the skull roof.

Below is a cladogram modified from Evans *et al.*, 2013.[6]





Paleobiology

As with most of its relatives, scientists do not yet know what these dinosaurs ate. However the premaxillary teeth and muzzle are not as wideset as in its relative *Stegoceras*, indicating different feeding preferences, possibly that *Prenocephale* was a more selective forager. Some scientists suggest that it may have been an omnivore, eating both plants and insects. However, most experts agree that *Prenocephale* (and the other pachycephalosaurs) browsed on leaves and fruit.

Restoration of flank-butting behavior

See also

- Timeline of pachycephalosaur research

References

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External links

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